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Report of the Board of Auditors

for the year ended 31 December 2014

Volume V
Capital master plan

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Note

Symbols of United Nations documents are composed of letters combined with figures. Mention of such a symbol indicates a reference to a United Nations document.

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Letter of transmittal

Letter dated 30 June 2015 from the Chair of the Board of Auditors addressed to the President of the General Assembly

I have the honour to transmit to you the report of the Board of Auditors on the capital master plan for the year ended 31 December 2014.

(*Signed*) Mussa Juma **Assad**
Controller and Auditor General of the United Republic of Tanzania
Chair of the Board of Auditors

Capital master plan: key facts

Cost

$1,877 million	Approved budget
$1,995 million	Revised consolidated budget
$2,309 million	Anticipated final cost
$49 million	Estimated cost of remaining works

Schedule

November 2013	Original date for completion
September 2014	Main buildings substantially completed and handed over
December 2016	Estimated project completion

Summary

Background

1. The United Nations refurbishment of its Headquarters in New York, the capital master plan, is a complex, high-value project to modernize and improve the operating efficiency of the buildings without compromising day-to-day operations. The General Assembly approved the project in 2002 and the current implementation strategy (accelerated strategy IV) in 2007. A budget of $1.877 billion was approved and the project was expected to be delivered in full by November 2013. Major benefits expected from the investment included a more modern, energy-efficient, safe and accessible working environment. A summary of key events over time is shown in section A, **figure I**.

Scope of the report

2. In its resolution 57/292, the General Assembly requested an annual report from the Board of Auditors on the capital master plan. The majority of the activities under the project have now been delivered and the present report, which is the twelfth annual Board report on the project, assesses its status as at 31 March 2015. The present report focuses on:

- Background (see sect. A);
- Project costs (see sect. B);
- Project schedule and scope (see sect. C);
- Handover (see sect. D);
- Maximizing the project's benefits (see sect. E).

Key findings

Project costs

3. **The decision of the General Assembly to remove the Library and South Annex Buildings from the project's scope reduced the total anticipated final cost of the capital master plan to $2,309 million, and reduced anticipated construction costs to $2,150 million (see table 1).** Resolution 69/274 A notes a final project cost of $2,304.8 million, representing the total anticipated final cost less a $4.2 million contribution for the secondary data centre. The Board has consistently reported the gross costs.

Table 1
Projected costs, budget and cost overrun as at March 2015
(Millions of United States dollars)

	Project (construction) costs	*Associated costs*	*Secondary data centre*	*Total budget and costs*
Approved budget	**1 877**			
Donations	14			
Enhanced security upgrade	100			
Contribution to secondary data centre			4	
Consolidated budget	**1 991**	**0**	**4**	**1 995**
Anticipated final costs	2 050			
Enhanced security upgrade	100			
Associated costs		140		
Secondary data centre			19	
Total anticipated final cost	**2 150**	**140**	**19**	**2 309**
Projected cost overrun	**159**	**140**	**15**	**314**

Source: Administration's data.

4. **The $65 million budgeted for the Library and South Annex Buildings was used to meet cost increases of other buildings that remained in scope to avoid an additional assessment on Member States (see A/69/5 (Vol. V), para. 12).** The General Assembly, in its resolution 69/274 A, removed the renovation of those buildings from the scope of the capital master plan. While the anticipated cost overrun therefore appears to have reduced by $65 million, it is important to note that that is the cost of delivering a significantly reduced project scope (the renovation of three buildings instead of five) at a higher cost than originally planned.

Finance

5. **The project has exhausted the available contingency funds and is now reliant on financial savings from contracts to meet any unforeseen costs arising in the future.** As at June 2015, the Administration estimates an overall savings of $39.5 million from obligations to the main contractor, which will be applied or is already earmarked to meet construction costs. Until all contracts are finalized and works completed it is likely the anticipated final cost will fluctuate, but the Administration is confident that sufficient funds are in place to complete the remaining scope.

Project schedule and scope

6. **As planned, the general debate in 2014 was held in the refurbished General Assembly Building.** That was a significant achievement given the disruption caused by earlier project delays and the impact of Storm Sandy. Against a compressed timetable the Administration was able to substantially complete the building in September 2014, with residual work on the north basement area substantially complete in December 2014. As at March 2015, the contract value of renovating the building was $186 million against an estimated cost of $143 million.

7. **The project, including all residual capital works, is now expected to be complete in December 2016, approximately three years later than originally planned in accelerated strategy IV.** The Office of the Capital Master Plan will close in July 2015 having substantially completed the three main buildings. The Office of Central Support Services will assume responsibility for completing the remaining elements. The elements include the demolition of the North Lawn Building, landscaping and the service drive on 42nd and 48th Streets, which were affected by the decision to retain the temporary building for the general debate of the seventieth session of the General Assembly and by delays in receiving planning permits. Those residual works have an estimated total cost of $35 million.

8. **The project will end without renovating the Library and South Annex Buildings as initially envisaged, but interim proposals have been submitted.** The General Assembly has requested that the renovation of the buildings be undertaken as separate projects through established procedures (see resolution 69/274 A). The proposed interim arrangements for relocating the functions of the South Annex Building, which includes the cafeteria, and for limited works to the Library Building, at an estimated cost of $14 million, will be met from within the existing capital master plan budget.

Handover arrangements

9. **The Administration is following comprehensive processes and procedures for handing over the refurbished buildings.** A well-managed handover is essential to securing the benefits of the newly refurbished buildings.

10. **It has taken longer than expected to close contracts with the main contractor.** As at June 2015, 11 of 24 contracts remained open, which the Administration expects to close by October 2015, four months later than planned.

11. **The Department of Management has developed a plan to retain key staff from the Office of the Capital Master Plan to ensure smooth completion of the remaining work.** In June 2015, the Department of Management agreed on plans to establish a core team within the Office of Central Support Services to close outstanding contracts and manage the remaining works. The team will comprise 11 staff members at an estimated cost of $1 million and 20 programme management consultants at a cost of $1.76 million, which will be funded from the project.

Benefits

12. **Long-term asset management. The strategic capital review, a 20-year rolling plan for asset maintenance, is a significant step towards developing a proactive long-term asset management strategy.** A long-term strategic asset management plan would provide greater certainty over future maintenance costs required to preserve the benefits of the significant investment in the capital master plan and would mitigate the risk of requiring another costly and disruptive renovation project in the future.

13. **Flexible workspace. The renovated campus offers a good opportunity to apply flexible workplace strategies and secure further benefits from the significant investment in the capital master plan.** The opportunity was missed to design flexible workspace directly into the renovation project, but it will be easier to implement that initiative following the renovation of the buildings into more

standard, modern and open office space. Increasing the efficiency of office space is common practice among modern business administrations. The pilot project in the Secretariat building has been generally well received, but the results suggest the Administration should set more ambitious goals going forward.

14. **Achieving the stated outcomes of the capital master plan. The Administration has not yet produced a benefits statement which confirms to the General Assembly that the stated outcomes of the project have been achieved.** With the project coming to a close, the next progress report of the Secretary-General is a good opportunity to confirm to Member States that the renovated campus is energy-efficient; free of hazardous materials; compliant with the host city's building, fire and safety codes; provides full accessibility to all persons; meets all reasonable, modern-day security requirements; and preserves the original architecture to the greatest extent possible.

Overall conclusion

15. Substantial completion of the capital master plan by September 2014 was a significant achievement given the project's complexity and its difficult start. The impact of unforeseen events and a history of inaccurate cost estimates have contributed to significant cost and time overruns over the life of the project, but have been contained more successfully in recent years. The Administration needs to closely manage delivery of the remaining $49 million of works for completion by December 2016. Issues regarding financing the remaining cost overrun have been resolved by the General Assembly. The Administration now has a plan in place to retain staff from the Office of the Capital Master Plan to help deliver the remaining scope. That has mitigated a key risk previously raised by the Board.

16. The Administration has not quantified the financial and other benefits expected from the capital master plan, nor are benefit-realization plans in place to manage and secure their achievement. The Administration is confident that in the short term expected energy savings will be achieved but that is not yet evidenced. To derive full benefit from the investment it is necessary to exploit fully the medium- and long-term savings that could be obtained from more efficient utilization of space and flexible working practices. By implementing the lessons learned from the project, the Administration will also be better placed to support the delivery of future capital projects such as the strategic heritage plan of the United Nations Office at Geneva.

Recommendations

17. **The Board recommends that the Administration manage the capital master plan to successful completion by:**

(a) **Continuing to closely manage the remaining works to ensure delivery by December 2016 within the $49 million budget;**

(b) **Managing and reporting that the project's outcomes have been delivered, including financial and non-financial benefits expected and achieved from the investment in the capital master plan;**

(c) **Accelerating closure of the remaining capital master plan contracts to increase certainty regarding final project costs and to release any potential savings;**

(d) **Reporting the full amount of any savings arising from contract closure and introducing appropriate governance mechanisms to determine the use that can be made of such savings, including specific consideration of returning savings to Member States;**

(e) **Applying wider learning from the capital master plan, including lessons documented in the Board's recent lessons-learned report, to future major projects.**

18. The Administration accepted all of the Board's recommendations.

A. Background

The project and its objectives

1. The refurbishment by the United Nations of its Headquarters in New York, the capital master plan, is a complex, high-value project to modernize, secure and preserve the architecture of the 1950s campus without compromising day-to-day operations. The original approved scope of the project included:

- Renovating five major buildings as well as the extensive basement complex, while maintaining existing operations;
- Constructing a temporary secure building, the North Lawn Building, to house certain activities normally carried out in the General Assembly Building, the Conference Building and the Secretariat Building during their renovation, and demolishing it after the completion of their renovation;
- Moving staff into and back from temporary office space across New York City, with more than 10,000 staff moves.

2. The expected project outcomes (see A/55/117) were a headquarters campus that:

- Is energy-efficient, free of hazardous materials and compliant with the building, fire and safety codes of the host city;
- Provides full accessibility to all persons;
- Meets all reasonable, modern-day security requirements;
- Preserves the original architecture to the greatest extent possible.

3. The General Assembly approved the original aims of the project in 2002 (see resolution 57/292) and the original budget of $1,877 million in 2006 (see resolution 61/251). In 2007, an accelerated strategy was adopted, involving increased costs and a shorter period of renovation to minimize disruption to United Nations operations. In 2003, the United Nations established the Office of the Capital Master Plan to manage delivery of the project, working with other parts of the Administration. The Office reports to the Under-Secretary-General for Management, who is the senior responsible owner of the project. The Office of the Capital Master Plan will close in July 2015 and the Office of Central Support Services will assume responsibility for completing the remaining elements of the project by December 2016.

Developments on the project since the Board last reported

4. The key stages in the development of the strategy and budget for the delivery of the capital master plan are summarized in **figure I**. Since the Board last reported:

- The General Assembly Building was substantially completed,[1] with operational handover in September 2014, ready for the general debate of the sixty-ninth session of the General Assembly;
- The North Screening Building was substantially completed, with operational handover in September 2014;

[1] Except for the north end of the first basement of the General Assembly Building, which was substantially completed and handed over in December 2014.

- The Secretariat Building was certified as complete and final handover occurred in May 2015.

5. At its sixty-ninth session, in March 2015, the General Assembly formally removed the Library and South Annex Buildings from the scope of the project owing to security concerns and authorized that the remaining cost overrun of the project be appropriated from the General Fund (see resolution 69/274 A). The anticipated cost overrun and plans for project financing are commented upon in section B of the present report. **Annex I** provides a summary of the changes in the budget and anticipated final cost estimates over time.

Previous recommendations

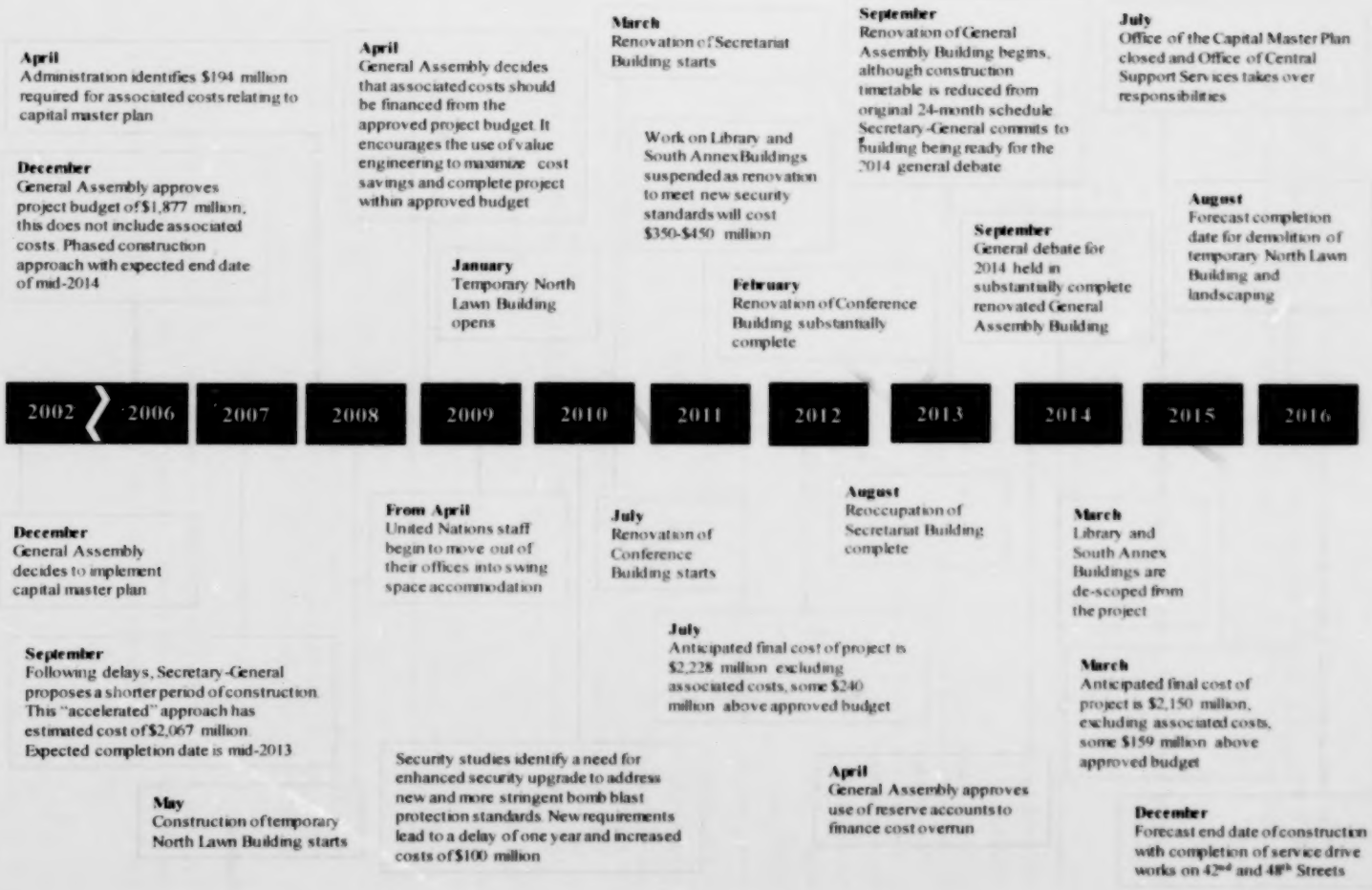
6. Of the nine extant recommendations, two have been fully implemented, five are under implementation and one has been closed by the Board (see **table 2**). The Administration has made no progress on implementing one recommendation: establishing an approach to independent assurance of major projects. The project is nearing completion and the amount of work remaining, and therefore the total level of funding at risk, is significantly reduced. Although previous recommendations may no longer seem as important in the context of the capital master plan, they are highly relevant and important for the successful delivery of future capital projects, and for the delivery of the remaining $49 million of works in scope. **Annex II** summarizes the actions taken in response to the Board's previous recommendations in more detail.

Table 2
Status of implementation of recommendations

	Fully implemented	*Under implementation*	*Not implemented*	*Overtaken by events*	*Closed by the Board*
Total	**2**	**5**	**1**	**0**	**1**
Percentage	22	56	11	0	11

Source: Board of Auditors.

Figure I
Administration's timeline of the project


April
Administration identifies $194 million required for associated costs relating to capital master plan
December
General Assembly approves project budget of $1,877 million, this does not include associated costs. Phased construction approach with expected end date of mid-2014
April
General Assembly decides that associated costs should be financed from the approved project budget. It encourages the use of value engineering to maximize cost savings and complete project within approved budget
January
Temporary North Lawn Building opens
March
Renovation of Secretariat Building starts
Work on Library and South Annex Buildings suspended as renovation to meet new security standards will cost $350-$450 million
February
Renovation of Conference Building substantially complete
September
Renovation of General Assembly Building begins, although construction timetable is reduced from original 24-month schedule. Secretary-General commits to building being ready for the 2014 general debate
September
General debate for 2014 held in substantially complete renovated General Assembly Building
July
Office of the Capital Master Plan closed and Office of Central Support Services takes over responsibilities
August
Forecast completion date for demolition of temporary North Lawn Building and landscaping
2002
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
December
General Assembly decides to implement capital master plan
September
Following delays, Secretary-General proposes a shorter period of construction. This "accelerated" approach has estimated cost of $2,067 million. Expected completion date is mid-2013
May
Construction of temporary North Lawn Building starts
From April
United Nations staff begin to move out of their offices into swing space accommodation
Security studies identify a need for enhanced security upgrade to address new and more stringent bomb blast protection standards. New requirements lead to a delay of one year and increased costs of $100 million
July
Renovation of Conference Building starts
July
Anticipated final cost of project is $2,228 million excluding associated costs, some $240 million above approved budget
August
Reoccupation of Secretariat Building complete
April
General Assembly approves use of reserve accounts to finance cost overrun
March
Library and South Annex Buildings are de-scoped from the project
March
Anticipated final cost of project is $2,150 million, excluding associated costs, some $159 million above approved budget
December
Forecast end date of construction with completion of service drive works on 42nd and 48th Streets

Source: Board of Auditors analysis of the Administration's data.

B. Project costs

7. Section B provides an update on the financial position as at 31 March 2015. **Table 3** shows the different cost elements under the capital master plan compared to the total approved budget and the Board's calculation of the total cost overrun against the approved budgets.

Table 3
Reported budget and estimated costs as at 31 March 2015
(Thousands of United States dollars)

	Capital master plan	*Associated costs*	*Secondary data centre*	*Total for the United Nations*
Approved budget	1 876 700		4 228	
Donations	13 912			
Enhanced security upgrade	100 000			
Total budget	**1 990 612**		**4 228**	**1 994 840**
Building renovation	1 212 430			
Swing space	308 512			
Rent	182 948			
Contingency	0			
Professional fees, management costs	346 083			
Enhanced security measures	100 000			
Associated costs		139 812		
Secondary data centre			19 268	
Total estimated costs	**2 149 973**[a]	**139 812**	**19 268**	**2 309 053**[b]
Estimated cost overrun	**159 361**	**139 812**	**15 040**	**314 213**
Percentage over budget	(8%)		(356%)	(16%)
Working capital reserve fund	(159 400)			
Remaining cost overrun	**(39)**	**139 812**	**15 040**	**154 813**

Source: Administration's data.

[a] The figure represents a reduction of $65 million resulting from the removal of the cost provision for the renovation of the Library and South Annex Buildings.

[b] Difference of $4.2 million from the $2,304.8 million reported in resolution 69/274 A; the Administration reports the secondary data centre as a net cost, the Board as a gross cost.

Budget

8. The Administration is reporting an unchanged position on the project budget since the last report of the Board. The consolidated budget remains $1,995 million, with $1,991 million relating to the construction works of the capital master plan and

a $4 million contribution for the secondary data centre. The associated costs[2] were not identified at the outset and had no assigned budget, a lesson for future projects the Board has highlighted in its report on lessons from the capital master plan.[3]

Anticipated final cost

9. During the sixty-ninth session of the General Assembly, the Board reported a total anticipated final cost of $2,374 million and a total cost overrun of $379 million against budget, comprising a $224 million overrun in construction costs[4] (11 per cent over budget) and $155 million in associated costs and the secondary data centre[5] (see A/69/5 (Vol. V), paras. 14 and 15). The causes of the cost overrun occurred in earlier periods and are reported in detail in previous Board reports. The figures were consistent with those reported by the Secretary-General at the sixty-ninth session of the Assembly.

10. Following the decision of the General Assembly to remove the Library and South Annex Buildings from the project's scope in March 2015, the anticipated final cost has been reduced to $2,309 million, reflecting the removal of the estimated $65 million cost to renovate the two buildings.[6] The total cost overrun calculated by the Board is now $314 million (16 per cent), including construction cost overrun of $159 million, equivalent to 8 per cent of the approved budget.

11. The Board has emphasized previously that the use of the $65 million originally budgeted represents an increase in the cost of the buildings that remain in scope (see A/65/5 (Vol. V), para. 12 of the summary). While the cost overrun appears improved, it is important to note that that is the cost of delivering a reduced scope (the renovation of three buildings instead of five) at a higher cost than originally planned.

Finance

12. In March 2015, the General Assembly, in its resolution 69/274 A, approved proposals to fund the remaining $154.8 million cost overrun. The plans entail an additional assessment of $45.0 million on Member States, and the use of $33.0 million of funds available from the cancellation of prior period regular budget obligations, $40.2 million of unencumbered balances and a $36.6 million credit from the Special Account.

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[2] Associated costs relate to goods and services that, while made necessary by the work of the capital master plan, are not directly attributable to the planned refurbishment, and were therefore excluded from the original budget. During the construction period of the capital master plan, temporary increases in staffing and operational costs will be required in certain parts of the Secretariat Building, such as, for example, the offices of the Department of Safety and Security.

[3] United Nations Board of Auditors, "Lessons from the United Nations Capital Master Plan", page 12. Available from http://www.un.org/en/auditors/board/pdfs/Lessons%20from%20the%20Capital%20Master%20Plan.pdf.

[4] The figure represents expenditure controlled by the Office of the Capital Master Plan and excludes associated costs and the secondary data centre.

[5] The secondary data centre is a back-up data facility located off-campus in New Jersey.

[6] Resolution 69/274 A notes a final project cost of $2,304.8 million, representing the total anticipated final cost less a $4.2 million contribution for the secondary data centre.

Process for estimating and reporting costs

13. Accurate forecasts at the outset of a project combined with transparent reporting helps mitigate the need to invest time, effort and money resolving and explaining changes later. The Board has repeatedly questioned the reliability of the Administration's approach to estimating costs (see A/67/5 (Vol. V), paras. 20-41; A/68/5 (Vol. V), paras. 24-29; and A/69/5 (Vol. V), paras. 17-25), and notes that its concerns are shared by the Advisory Committee on Administrative and Budgetary Questions, who have reported they could not accept assurances of the cost estimates (see A/67/548). The Administration has only partially implemented the Board's previous recommendations in its approach to forecasting, as demonstrated in the following paragraphs.

14. Until the decision to remove the Library and South Annex Buildings from the plan in March 2015, the anticipated final construction cost had not changed since December 2013. The Administration, considering a change unlikely, stopped monthly reporting of the anticipated final cost in July 2014, instead updating the position only in October 2014 and January 2015. Although the overall total anticipated final construction cost may not have changed, there have been considerable changes in the cost of sub-elements of the project since the Board last reported. Wide variations in cost estimates over time undermines confidence in their reliability. Examples include:

- The estimated cost of residual capital works to be delivered by the Office of Central Support Services has increased by $8.5 million since 2014 (see **table 4**);
- The Administration initially reported an estimated cost for demolition of the North Lawn Building of $1.9 million, however the estimated net cost[7] has now increased to $15.4 million. The Administration attributes the initial low estimate to reliance on high-level assumptions based on limited information available at the time, which were not revisited until 2015;
- The estimated costs of landscaping and service drive works have been reduced by $3.0 million and $2.0 million respectively to $19.7 million. The Administration attributes those reductions to increased certainty over requirements owing to more advanced designs, a simplified design for the grounds following demolition of the North Lawn Building and the reuse of portions of the existing security systems for the service drives.

[7] The reported cost is the estimated net cost of demolition and excludes assets the contractor is allowed to retain.

Table 4
Cost changes to residual capital works
(Millions of United States dollars)

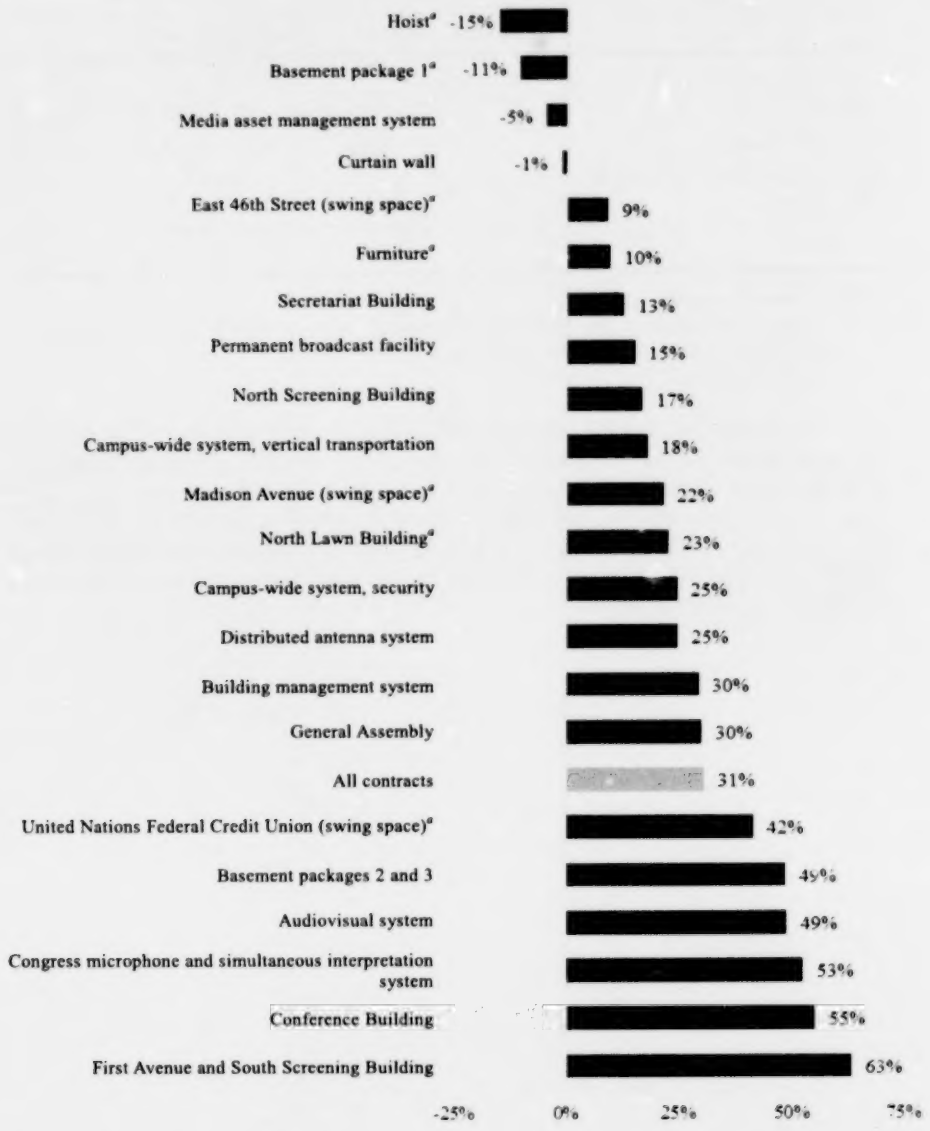
	Estimated cost in 2014[a]	*Estimated cost in 2015[a]*	*Change*
Demolition of the North Lawn Building	1.9	15.4	+13.5
Site landscaping	8.0	5.0	-3.0
Service drive works on 42nd and 48th Streets	16.7	14.7	-2.0
Total	**26.6**	**35.1**	**+8.5**

Source: Administration's data.
Note: The Office of Central Support Services will manage those works after the closure of the Office of the Capital Master Plan in July 2015.
[a] Estimated net cost.

15. There have also been a large number of change orders to contracts. In response to uncertainties in the condition of the buildings, the Administration adopted a strategy which allowed construction work to begin using incomplete designs rather than await complete detailed design documents.[8] The approach added risk, uncertainty and cost to the project, and resulted in approximately 4,300 change orders as at March 2015. **Figure II** shows the value of change orders expressed as a proportion of contract values.

[8] See United Nations Board of Auditors, "Lessons from the United Nations Capital Master Plan".

Figure II
Proportion of contract values accounted by change orders as at March 2015



Source: Board analysis of the Administration's data.
Note: Change orders can also include credits which reduce the value of the contract.
[a] Contract is closed as at March 2015.

16. In addition to changes in the cost of existing works, the Administration has introduced new works since the Board last reported. In March 2014 the Administration informed the Fifth Committee that any plan to relocate the functions of the Library and South Annex Buildings could not be funded by the capital master plan, and would require additional funding. In March 2015 the Administration announced plans to relocate those functions as an interim solution at an estimated cost of $14 million (see table 5). The $14 million was not included in the anticipated final cost reported in the twelfth progress report of the Secretary-General, but the Administration has confirmed it can be funded by utilizing project funds which were earmarked to cover potential shortfalls in amounts recovered from insurers for damage caused by Storm Sandy which are no longer required. The Secretary-General had reported previously to Member States a total insurance coverage of $150 million, of which a $148.9 million claim would be submitted (see A/67/748). Information provided to the Board indicates that while the level of coverage and claim are lower than that reported, the eventual settlement has covered the Organization's losses.

Table 5
Interim solution
(Millions of United States dollars)

	Estimated cost	*Status as at June 2015*	*Expected completion date*
Relocation of South Annex cafeteria functions	5.0	Under construction	July 2015
Limited renovation of the Library Building	4.0	Under construction	August 2015
Fit out of the third basement of the North Lawn Extension Building	5.0	Design	January 2016
Total	**14.0**		

Source: Board analysis of the Administration's data.
Note: Relocation of the cafeteria consists of construction work in three areas, with the main element finished in June 2015.

Savings and unused provisions

17. In March 2013, the Board identified an estimated $20 million of unreported contingency from unused obligations (i.e., savings) under guaranteed maximum price contracts, with $10 million used to fund cost overruns (see A/68/5 (Vol. V), para. 34 and A/69/5 (Vol. V), para. 19). In June 2015, the Administration estimated $39.5 million cumulative savings from its obligations with the main contractor. Those savings are included in the $151.2 million "savings on the prior-period obligations" reported in the twelfth annual progress report on the implementation of the capital master plan of the Secretary-General (A/69/360), and are recycled to cover project costs arising from acceleration and change orders. Until all contracts are finalized and works completed, the final costs and any savings will not be known.

18. As noted in previous Board reports and its lessons-learned paper,[9] good practice dictates that contingency funds should be available to manage risks, not general cost increases, with no expectation that all contingency amounts will be used. In the Board's view, in the interests of enhancing transparency and accountability, similar considerations should apply to recycled contract savings and the redeployment of unused balances. The Board could find no evidence that the Administration has considered returning future surpluses to Member States.

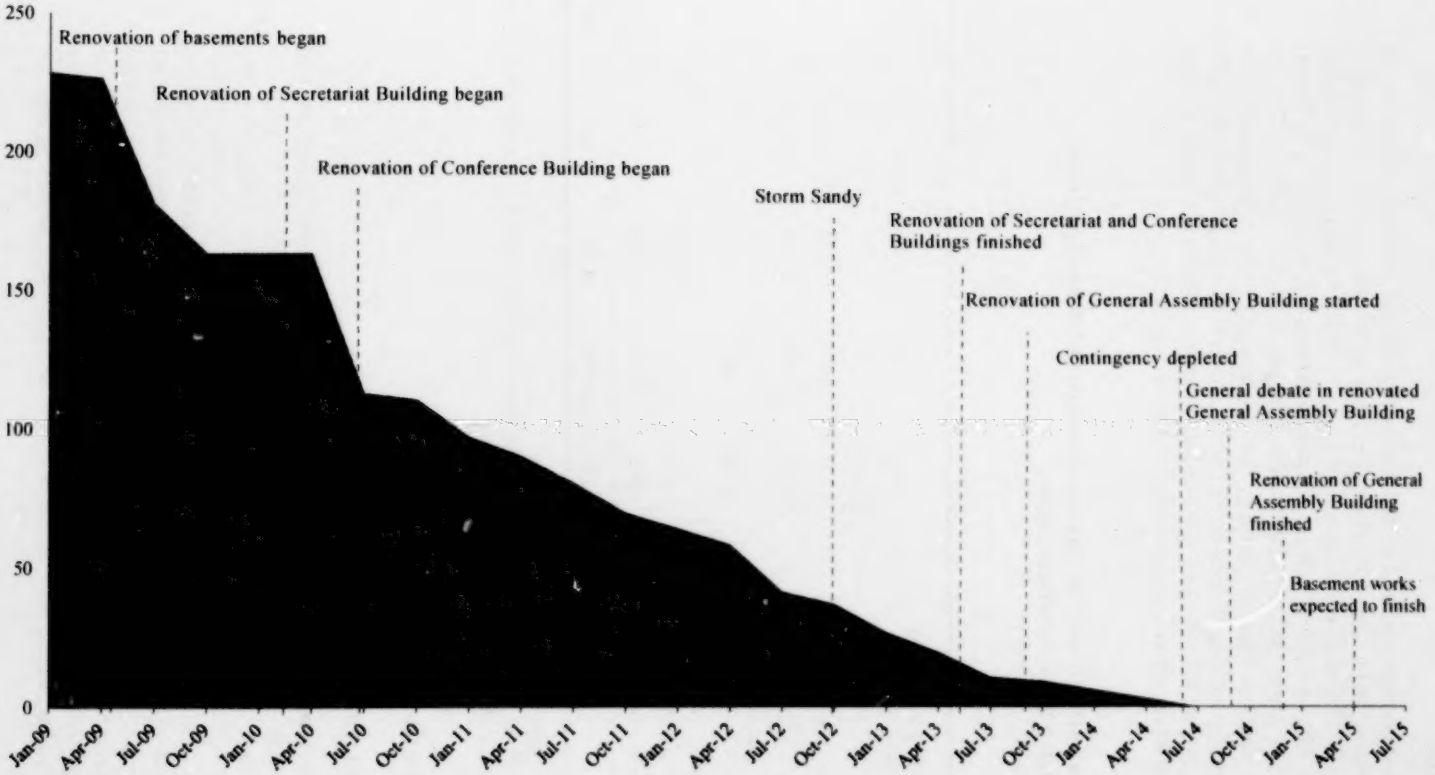
Contingency

19. There is no contingency available to mitigate any future cost pressures of the remaining works. Figure III shows that the contingency was depleted in June 2014, at which point works on the General Assembly Building and the basements were still ongoing. As at June 2015, 11 of 24 contracts remained open, with works still ongoing as part of the final handover. While risks may decrease with activity nearing completion, there remains the risk of potential additional costs during the close-out of remaining contacts from change orders and possible claims from contractors.

20. Given the inaccuracy of previous cost estimates, the Administration should assure itself that the $49.00 million to deliver the remaining works is a reasonable forecast. The Administration is confident that the cost estimates are robust as they are based on detailed final designs. The $49.00 million also includes $5.30 million of contingency funds, with $3.45 million set aside for the residual capital works ($35.00 million) and $1.85 million for relocating the functions of the Library and South Annex Buildings ($14.00 million).

[9] See United Nations Board of Auditors, "Lessons from the United Nations Capital Master Plan", pages 26-29.

Figure III
Contingency
(Millions of United States dollars)



Source: Administration's data.
Note: Dates reflect substantial completion of buildings.

Associated costs

21. Associated costs represent activities essential to the successful completion of the project. In August 2014, the Administration reported to the General Assembly a revised total of $139.8 million for associated costs. The Board's previous report noted that the figure may understate actual expenditure incurred as it assumes no further expenditure after biennium 2012-2013, even though renovation activities for the capital master plan were then scheduled to continue into 2015. The Administration has since reprofiled expenditure to show $218,000 of associated costs recorded after 2013 (see table 6). The additional costs relate primarily to the Office of Central Support Services for handover activities performed through March 2015.

Table 6
Summary of associated costs for the capital master plan by department or office as reported by the Administration
(Thousands of United States dollars)

	2008-2011	*2012*	*2013*	*2014*	*2015*	*Total*
Department for General Assembly and Conference Management	2 273	638				2 911
Department of Public Information	23 969	287	(2)			24 254
Office of Central Support Services	20 229	3 746	3 370	114	65	27 525
Office of the Capital Master Plan	17 664	7 785	24 065			49 513
Office of Information and Communications Technology	1 984	627	5			2 616
(Construction) Office of Information and Communications Technology	5 439	81	665			6 185
Department of Safety and Security	18 688	5 786	2 296	39		26 809
Total	**90 244**	**18 950**	**30 399**	**153**	**65**	**139 812**

Source: Board analysis of the Administration's data.
Note: The Administration originally assumed that associated costs would end by December 2013 as construction work was expected to have ceased by that date.

C. Project schedule and scope

General Assembly Building

22. The general debate of the sixty-ninth session of the General Assembly was successfully hosted in the renovated General Assembly Building. In its previous report the Board highlighted that adequate time remained for completing the renovation, provided that any risks were well managed. In practice, the Administration mitigated significant risks to achieve that important milestone, including deficiencies in the quality of design drawings, a later-than-planned start date and the impact of Storm Sandy. To mitigate those risks, the Administration created three separate contracts, "early works", "infrastructure" and "finishes", to reduce the time required to develop one complete construction document. The approach enabled renovation work to begin rapidly and preserved sufficient time for

testing audiovisual and other equipment, a lesson learned from the renovation of the Conference Building.

23. A substantially complete General Assembly Building was handed over in September 2014, with some works completed after the general debate. In late December 2014, the north end of the first basement of the building was substantially completed. As at March 2015, the latest contract value for renovating the General Assembly Building was $186 million against a restated budget of $143 million. The figure includes $8.8 million of acceleration costs above the amount already agreed with contractors to meet the costs of working within a compressed schedule, an increase from the $1.0 million the Administration estimated in March 2014.

Overall progress against schedule

24. As at September 2014, the Secretariat Building, the Conference Building and the General Assembly Building were certified as substantially complete[10] and handed over to the Facilities Management Service in the Office of Central Support Services. As at June 2015, "punch-list" work (remedial work) remained to be completed for the Conference Building and the General Assembly Building, and the Administration expects final completion of those buildings in July 2015. The Secretariat Building was certified as finally complete in May 2015. The Administration expects all remaining works of the main contractor, including the basements and security works on First Avenue, to be certified as finally complete by August 2015.

25. The programme of works suffered substantial delays in the past and the accelerated strategy IV envisaged completion by November 2013. When the Board last reported, the planned completion date of all construction works had slipped by 17 months to April 2015. The Administration is committed to completing the remaining elements of the project by December 2016. A summary of construction times for the major elements of the programme is provided in table 7 below.

Table 7
Changes to the schedule of main project elements

	Original construction forecast[a]	*Actual construction duration*[b]	*Difference*
Secretariat Building	36 months	39 months	+ 3 months
General Assembly Building	24 months	16 months	- 8 months
Library and South Annex Buildings	24 months	suspended	
Basements	54 months	71 months	+ 17 months
Conference Building	24 months	36 months	+ 12 months

Source: Board analysis of the Administration's data.

[a] Original construction forecast taken from accelerated strategy IV.

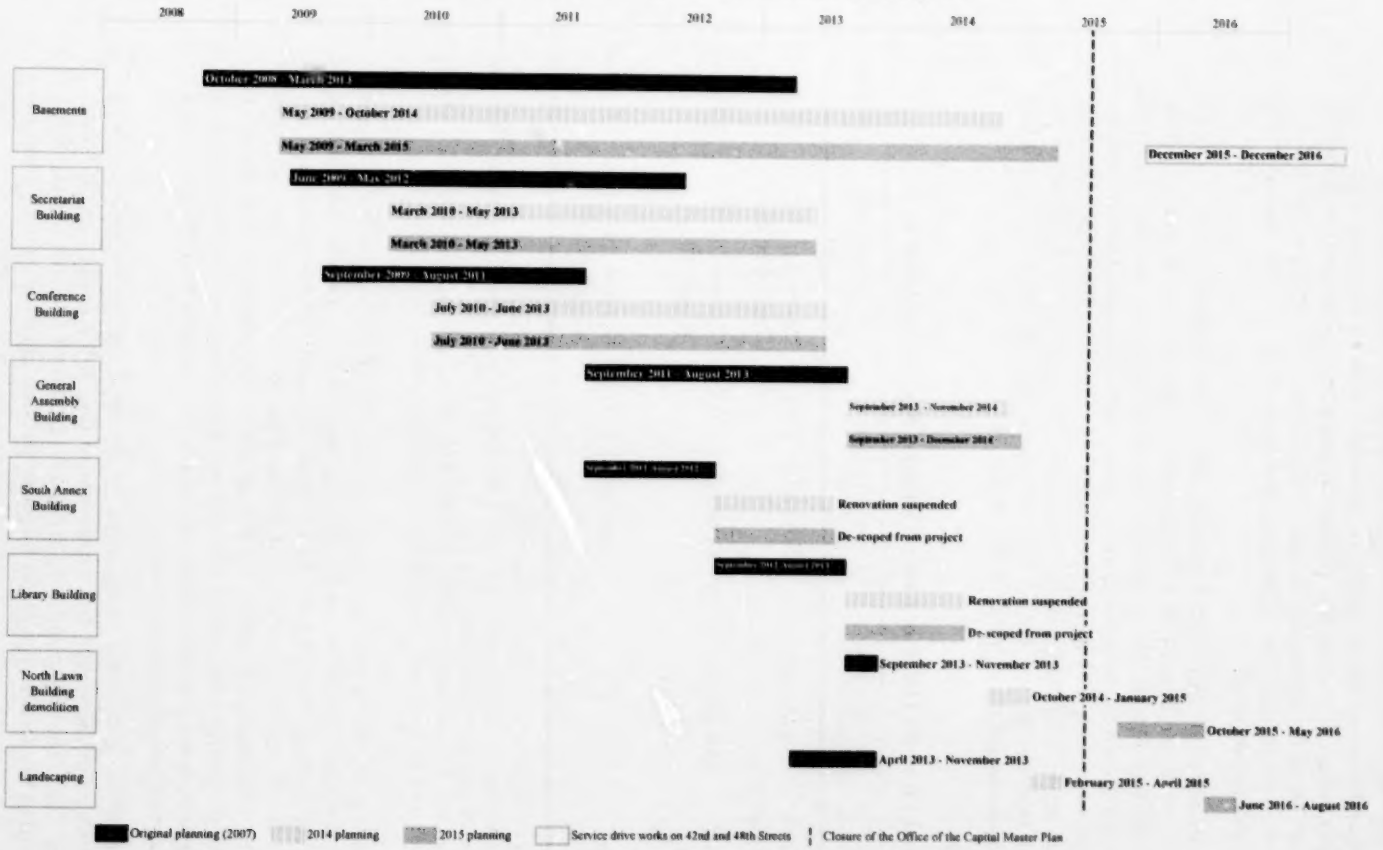
[b] Actual construction duration reflects substantial completion.

[10] A building is certified as substantially complete when it allows safe and legal occupancy and use. The Secretariat Building was substantially complete in September 2012 and the Conference Building was substantially complete in February 2013.

26. Some of the delay to the programme was due to unforeseen events, including damage arising from Storm Sandy and increased security requirements. However, the high volume of changes required to complete the project, discussed in section B, also delayed the schedule and increased costs. Figure IV shows how the forecast completion dates for the project's main elements have changed.

Figure IV

Comparison of current schedule against last year's planning and accelerated strategy IV



Source: Board analysis of the main contractor's master schedules and information supplied by the Administration.

Notes:

The dates reflect construction or renovation activity. It excludes financial and administrative close-out of subprojects.

Service drive works on 42nd and 48th Streets was originally included as part of the overall basements contract. In 2014, it was removed from the scope of the capital master plan and from the main contractor and project management responsibility was transferred to the Office of Central Support Services.

2015 planning dates for the North Lawn Building demolition and landscaping are indicative durations. The Administration proposes contracting those elements as a single contract, with demolition work to commence in October 2015 and landscaping work to be complete in August 2016.

The Administration informed the Board that the basements were substantially complete in March 2015. That excludes levels 1B, 2B and 3B of the parking garage with access ramps.

Transfer of remaining capital works

27. In July 2015, the Office of Central Support Services assumes responsibility for completing the capital master plan. Originally the Administration planned for the Office of Central Support Services only to undertake work on the service drives on 42nd and 48th Streets. However, the decision to retain the North Lawn Building for the general debate of the seventieth session of the General Assembly in 2015 means that it is also responsible for managing the demolition of the building and subsequent landscaping work.

28. The Administration informed the Board that a request for proposals for those works will be submitted in summer 2015 to enable construction work to start before the end of 2015 (see table 8). Originally, the Administration had assumed that construction work on 42nd and 48th Streets would last 18 months, but now expects it can be completed within 12 months to comply with the overall schedule deadline of December 2016. That will require statements of works to be supplied to the Procurement Division by the end of July to ensure adequate time to receive and evaluate bids and award the contract in November 2015.

Table 8
Residual works that the Office of Central Support Services will deliver

Residual capital work	*Expected request for proposal issue date*	*Expected contract award date*	*Forecast construction period*	*Expected construction duration*
Works on 42nd and 48th Streets	August 2015	November 2015	December 2015 to December 2016	12 months[a]
Demolition of North Lawn Building	July 2015	September 2015	October 2015 to August 2016[b]	10 months
Landscaping	July 2015	September 2015	October 2016 to August 2016[b]	10 months

Source: Board's analysis of the Administration's data.

[a] The Administration originally expected to award the contract for the works on 42nd and 48th Streets in April 2015 for an 18-month construction period.

[b] Landscaping will be issued as an addition to the package for the demolition of the North Lawn Building. Current estimates are seven months for demolition and three months for landscaping.

29. In addition to the remaining capital works, the Office of Central Support Services will also be responsible for closing out some of the remaining contracts on the project. As at June 2015, 11 of the 24 main contracts remain open, as it has taken longer for the Office of the Capital Master Plan to close those contracts than expected. The Administration attributes that to delays completing punch-list work following the substantial completion of buildings, finalizing documentation such as warranties and operating manuals and changes in the composition of the project team and the construction manager's team.

30. The Board has previously commented on the need for the Administration to retain and utilize the knowledge and experience of the Office of the Capital Master Plan. In June 2015, the Department of Management agreed to plans to establish a core team within the Office of Central Support Services made up of staff from the

Office of the Capital Master Plan. The team will close all outstanding contracts and handle project management for the remaining works at an estimated cost of $2.76 million, funded from the project, comprising:

- Five staff members and three contractors to complete the administrative close-out of the Office of the Capital Master Plan. The staff members will be assigned to the Office of Central Support Services from 1 July to 31 October 2015 (four months) at an estimated cost of $0.3 million;
- Three staff members to handle project management for the delivery of the $49 million in residual capital works and interim solutions for the Library and South Annex Buildings. The staff members will be assigned to the Office of Central Support Services from 1 July 2015 to 31 December 2016 (18 months) at an estimated cost of $0.7 million;
- The team will also be supported by 20 programme management consultants until December 2015 at a cost of $1.76 million.

Library and South Annex Buildings

31. In 2011, the Office of the Capital Master Plan suspended design work on the remaining buildings, the Dag Hammarskjöld Library Building and the South Annex Building, owing to security concerns over blast resilience and the proximity of the FDR Drive off-ramp. It was estimated that it would cost $350-$450 million for those buildings to meet security requirements against an original renovation budget estimate of $65 million. In view of the unaffordability of the measures, the Administration assumed there would be no renovation of those buildings even though they remained within project scope.

32. In March 2015, the Library and South Annex Buildings were formally removed from the scope of the project. Resolution 69/274 A committed to the renovation of those buildings but requested the Secretary-General to present future proposals for renovating them as separate projects outside of the scope of the capital master plan. The Library and South Annex Buildings represent 8 per cent (16,000 m^2) of the planned floorspace for renovation.

Interim solutions

33. The Administration's view is that the functions of the Library and South Annex Buildings would be best served through incorporation into future decisions regarding long-term accommodation at Headquarters. Nevertheless, it has developed interim plans to relocate those functions at an estimated cost of $14 million.

34. The Administration has developed plans[11] to implement limited occupancy of the Library Building. The northern side of the building would be used for the Library as well as minimal office renovation for some 120-140 staff members. The southern side would be used for storage with a security catchment system to separate the office space from southern-facing façade along 42nd Street. The building could not incorporate current use of the auditorium or penthouse.

35. In comparison, the South Annex Building can be used only for storage. The Administration is developing plans for relocating the functions of the building (see

[11] Plans are based on the current security assessment and use of the building would have to be reviewed if the risk threat were to change.

table 9), some of which are yet to be agreed. It has firm plans for alternative cafeteria arrangements split across three areas of the campus, albeit with a 30 per cent reduction in seating. The Administration has also developed initial plans for the third basement of the North Lawn Extension Building to accommodate the other functions of the South Annex Building.

36. The Office of the Capital Master Plan will commence the majority of construction work for the interim solutions, with completion overseen by project managers transferred to the Office of Central Support Services.

Table 9
Proposals for relocating the functions of the South Annex Building

Function	*Plans*	*Status as at June 2015*
Cafeteria	Smaller cafeteria on fourth floor of the Conference Building, which would have roughly half of the seating available in the existing café (around 220 seats)	Completed in June 2015
	Manned kiosk in the Secretariat Lobby that would also serve as pick-up point for grab-and-go meals ordered in advance (around 40-50 seats)	Construction work has started and is expected to finish in July 2015
	First basement of the Secretariat Building would act as pick-up point for grab-and-go meals to supplement the smaller cafeteria (around 50 seats)	Construction work has started and is expected to finish in July 2015
Language classrooms and offices	Third basement of the North Lawn Extension Building; the proposal is yet to be finalized	Construction is expected to start in September 2015 and finish in January 2016
Touchdown space for interpreters	That is yet to be determined; the Administration is exploring whether it can accommodate some 130 spaces for interpreters in the Secretariat Building.	

Source: Board analysis of the Administration's data.

D. Handover

37. Effective planning and execution of the handover of buildings is essential for a smooth transition from a renovation project to everyday operations. Decisions made at that point are the key to deriving the benefits envisaged at the start of the project. Both the Office of the Capital Master Plan and the Office of Central Support Services state that good processes are in place between them, with neither having significant concerns with respect to delivery.

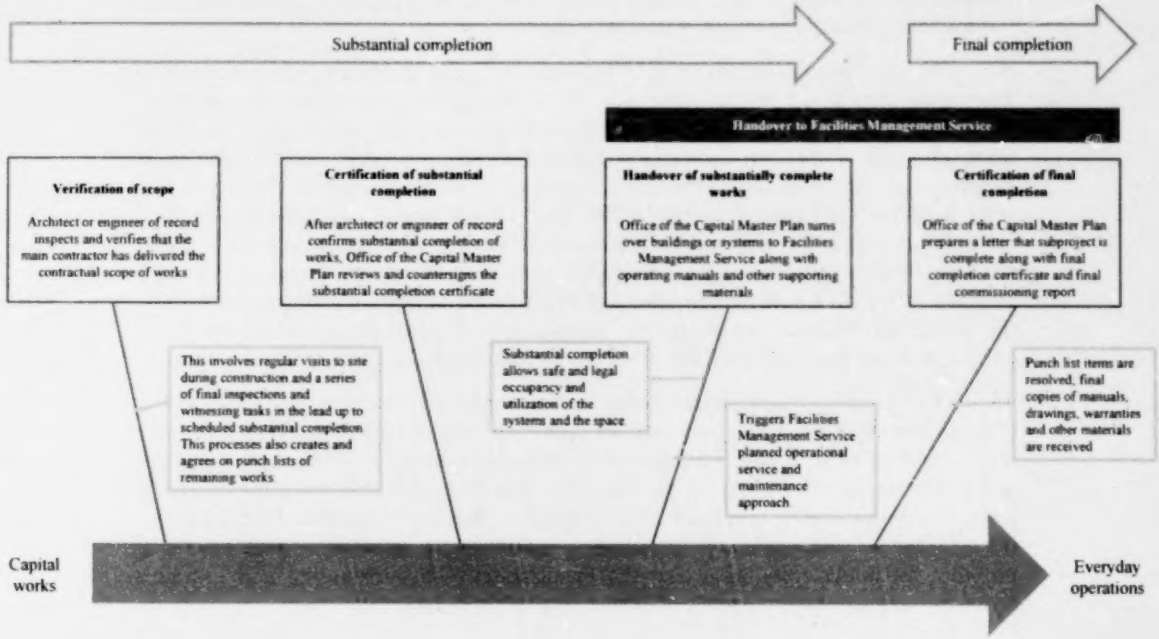
Transition into everyday operations

38. The Office of the Capital Master Plan, the Office of Central Support Service and the main contractor have adopted processes and procedures that display characteristics associated with effective handover. Those typically include:

- Specific roles in place to monitor and undertake checking and verification;
- Processes and procedures that are required to be followed in order to record, document and confirm the status of the handover process;
- An efficient and comprehensive method of transferring responsibility and ownership of the renovated works from the main contractor to the on-site facilities management service.

39. The Office of the Capital Master Plan has been handing over phases of the campus when work is considered "substantially complete" by either the Project Architect or relevant Project Engineer. Certification of a building or system as substantially complete allows safe and legal occupancy and use of the space and systems. Figure V outlines the broad stages of the project's handover process. The phased approach to handover has increased the level of challenge because of the need to coordinate multiple handovers.

Figure V
Handover process to Facilities Management Service


Substantial completion
Final completion
Handover to Facilities Management Service
Verification of scope
Architect or engineer of record inspects and verifies that the main contractor has delivered the contractual scope of works
Certification of substantial completion
After architect or engineer of record confirms substantial completion of works, Office of the Capital Master Plan reviews and countersigns the substantial completion certificate
Handover of substantially complete works
Office of the Capital Master Plan turns over buildings or systems to Facilities Management Service along with operating manuals and other supporting materials
Certification of final completion
Office of the Capital Master Plan prepares a letter that subproject is complete along with final completion certificate and final commissioning report
This involves regular visits to site during construction and a series of final inspections and witnessing tasks in the lead up to scheduled substantial completion. This processes also creates and agrees on punch lists of remaining works
Substantial completion allows safe and legal occupancy and utilization of the systems and the space
Triggers Facilities Management Service planned operational service and maintenance approach
Punch list items are resolved, final copies of manuals, drawings, warranties and other materials are received
Capital works
Everyday operations

Source: Board of Auditors analysis of the Administration handover process.

40. The ability of the Facilities Management Service to run the campus in an effective and efficient manner is dependent upon the adequate transfer of knowledge during handover and is linked to the timely closure of contracts. With 11 of 24 contracts still open as at June 2015, the Facilities Management Service is still awaiting final documentation, including warranties and operating manuals to assist in the effective operations of systems and buildings.

41. The Administration has adopted a comprehensive commissioning plan designed by an independent company. The plan includes a requirement for operational monitoring and reporting, but the Administration was unable to provide it at the time of audit so the Board can provide no assurance that it has been carried out effectively. Testing and commissioning activities appear to have been planned in stages owing to the nature, extent and the magnitude of the newly installed central services infrastructure and the campus which it serves. Interruptions to the day-to-day running of the campus have been minimal throughout the process. Typically, a small number of larger service shutdowns have taken place as part of the plan, with the campus being warned of the likely interruption to services as required. The approach taken in those circumstances is recognizable as industry good practice.

Running everyday operations

42. The systems installed as part of the renovation are critical to the effective operation of the campus. The phased handover approach required the Facilities Management Service to organize maintenance using different approaches. Where maintenance contracts were not arranged in time, the related functions are serviced in-house or through ad hoc arrangements, such as warranties or using the main contractor to manage temporary maintenance.

43. The interim solutions are currently working, but as at March 2015 a number of key maintenance contracts were yet to be finalized, especially campus-wide mechanical, electrical and plumbing infrastructure and the major services plant. That presents a risk to operations going forward, as such maintenance is a fundamental part of ensuring the smooth running of building services for any newly renovated or constructed facility. Had the Administration contracted for both installation and a short period of maintenance of equipment and systems it could have avoided the risk of having a period of time without key maintenance contracts in place. It would also have provided a period of time to build understanding of how the buildings operate to inform its long-term maintenance approach. Such an approach could be considered for other construction projects in the future.

44. The Facilities Management Service, drawing on advice from the Office of the Capital Master Plan, has developed an approach where 10 maintenance contracts will be delivered in house, 13 contracts will be outsourced to third-party suppliers and 1 contract will be a mix of the two. The Administration informed the Board of plans to commission a specialist firm in 2017 to provide independent assurance of the success or otherwise of its adopted maintenance approach. That approach provides an opportunity to revisit the balance between outsourcing and in-house provision to ensure the cost-effective use of available resources

E. Maximizing the project's benefits

45. The Administration needs to demonstrate the benefits of the $2.3 billion investment made by Member States. Some benefits are immediate and evident. The renovated buildings and basements now provide a more modernized working environment operated by more sophisticated systems and equipment while providing improved security for much of the campus. Those improvements were delivered while retaining important architectural and aesthetic heritage and maintaining business-as-usual operations. However, as the Board previously reported (see A/69/5 (Vol. V)) the

expected outcomes of the project were qualitative, ill-defined and lacked an objective measure to judge success and to calculate a return on investment. In that regard, the Advisory Committee on Administrative and Budgetary Questions has recommended that the General Assembly request the Secretary-General to report on the actual project benefits, as compared with the planned benefits, in future annual progress reports (see A/69/529, para. 15). In the Board's view that should include the financial and non-financial benefits of the capital master plan, including an objective assessment of achievement against the stated outcomes of the project that the renovated campus:

- Be energy-efficient, free of hazardous materials and compliant with the building, fire and safety codes of the host city;
- Provide full accessibility to all persons;
- Meet all reasonable, modern-day security requirements;
- Preserve the original architecture to the greatest extent possible.

46. Other expected benefits were quantifiable and include improved environmental performance: a 50 per cent reduction in energy consumption; a 40 per cent reduction in fresh water consumption; and a 45 per cent reduction in CO_2 emissions. However, as at March 2015, the building management systems that will collect data on utility consumption and energy efficiency were not fully operational. It is not therefore possible at the present stage to measure the extent to which the expected benefits have been delivered. Nevertheless, the approved budget for the biennium 2014/2015 assumes reduced utility costs of $5.4 million compared with the biennium 2012/2013.

47. While the Administration did not have a formal benefits realization plan for the capital master plan, there are still opportunities to ensure that the project realizes benefits. In particular:

- Maintaining existing benefits, such as adopting a long-term asset management strategy for the renovated campus;
- Obtaining greater benefits, such as implementing flexible working to increase space utilization and efficiency.

48. A wider benefit to be exploited is the experience and lessons learned from the capital master plan. As the Administration embarks on a series of capital projects, it is particularly important in a context of fiscal constraint to minimize cost overruns and optimize value in order to distribute more contributions from Member States to front-line expenditure. Unlike most organizations, the United Nations does not have an established approach for managing and assuring delivery of major projects, making embedding the lessons problematic. The Board has published a lessons paper on the capital master plan drawing on wider knowledge of best practice of major projects. It highlights some of the more important and systemic lessons which are of direct relevance to future capital projects. There are initial signs that the strategic heritage plan is embedding those lessons in their approach to delivering the early stages of the project, such as including associated costs within the budget from the outset. The Board will report on the progress of the strategic heritage plan at the seventieth session of the General Assembly.

Long-term asset management strategy

49. To avoid the need for repeated and costly capital master plans, the Administration needs to move away from its traditional reactive and costly approach to maintaining assets. The Administration did not and still does not have a whole life-cycle asset investment strategy for its Headquarters, which arguably led to the need for the highly disruptive capital master plan.

50. The strategic capital review aims to improve global facilities management and the Administration's understanding of needs and provide a way to prioritize developing and maintaining the global estate. Key to any asset management plan is having comprehensive data. Driven by the adoption of the International Public Sector Accounting Standards, the Administration has assessed the conditions of its global estates and life-cycle replacement analyses. The subsequent data informed an initial 20-year capital maintenance programme from 2018 to 2037, although certain capital works in Geneva, Beirut, Addis Ababa and Arusha, United Republic of Tanzania, are currently excluded from the current cost estimates.

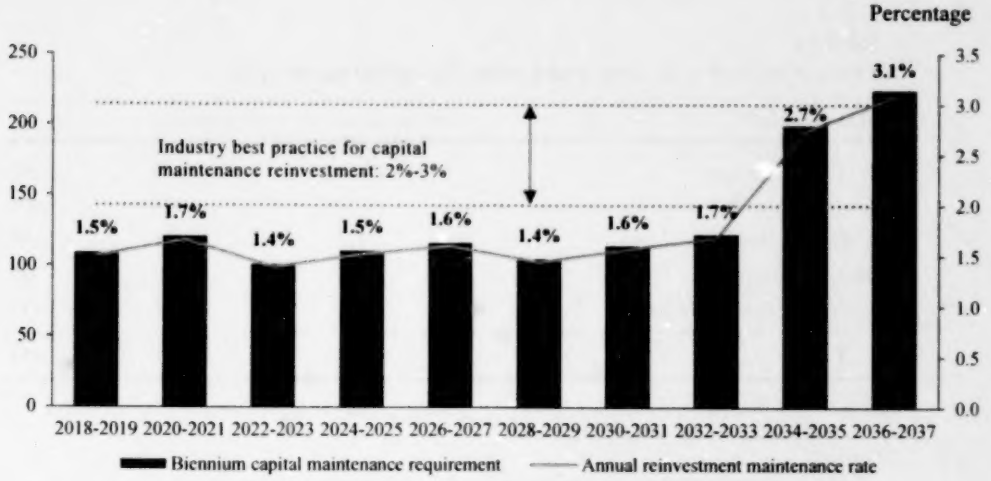
51. In March 2015 the General Assembly expressed its overall support for the strategic capital review, but requested that the Secretary-General:

- Better assess the potential costs and benefits of a preventive maintenance programme, as opposed to the existing reactive approach;
- Consider the importance of ensuring the availability of appropriate in-house expertise in the context of the implementation of the strategic capital review;
- Put in place appropriate oversight mechanisms.

52. The Administration estimates a total capital maintenance requirement of $1.326 billion over the next 20 years (see figure VI). The level of capital improvements necessary for more proactive maintenance is significantly higher than previous maintenance budgets, with an average biennium expenditure of more than $130 million on capital maintenance compared with a historic average biennium expenditure of around $80 million. The Board notes that for the first 16 years the planned maintenance reinvestment rate is below the industry best practice cited by the Administration of between 2 and 3 per cent.

Figure VI
Proactive capital maintenance requirements cost estimates from 2018 to 2037

(Millions of United States dollars)



Source: Administration's data.

53. While there is an increase in the capital maintenance budget in the longer term, it is expected to deliver benefits. As time passes, with a reactive maintenance approach, the cost of keeping the asset operational increases, as does the inconvenience from unexpected and increasingly severe interruptions. Studies indicate that a preventative approach could save as much as 12 per cent compared to a reactive approach over time. The General Assembly, in its resolution 69/274 A, requested further assessment of the costs and benefits of preventative maintenance and whole life-cycle management of assets versus the existing reactive approach.

Flexible working

54. The project did not set space utilization targets, although it is expected to realize more efficient use of office space and the configuration towards open-plan offices increases staff collaboration and productivity. Table 10 shows that the total number of seats available for staff is expected to be fewer in the renovated buildings. The adoption of flexible working provides an easy win for the Administration, as it estimates it could accommodate an additional 20 per cent of staff members in existing space and realize savings from the termination of some off-site leases. A major advantage of the capital master plan is that structural improvements to the buildings make any reconfiguring of workspace for flexible working relatively simple.

55. In April 2015, the General Assembly approved the business case to implement flexible working at Headquarters as well as recommending that it be considered in other duty stations, including as part of the strategic heritage plan. The anticipated investment cost of implementing flexible working is $49.6 million, which the Administration plans to offset through the termination of commercial leases, which from 2019 would save the Administration $19.8 million each year. The

Administration estimates that flexible working could accommodate an extra 800 staff members in the Secretariat Building and 150 staff members in the FF Building by applying a similar seat-to-person ratio of 0.81 to 1.00 (81 work seats for 100 staff members) applied in the successful pilot.

Table 10
Number of staff seats before and after the capital master plan

Renovated building	*Pre-renovation*	*Post-renovation*	*Change*
Secretariat Building	2 763	2 865	+102
Basements	727	246	-481
Conference Building	112	77	-35
Library Building	95	140	+45
General Assembly Building	28	74	+46
Total	**3 725**	**3 402**	**-323**

Source: Administration's written response to questions from the Fifth Committee at the sixty-ninth session of the General Assembly.

Notes:

Assumes that limited renovation to Library Building occurs and upper range of seats is accommodated.

Does not include any changes due to the pilot of flexible workspace.

56. The Administration piloted flexible working on the 18th and 19th floors of the Secretariat Building involving 128 staff members from the Strategic Planning and Staffing Division of the Office of Human Resources Management. The Administration reports that staff members were broadly positive about flexible working and supportive of more frequent interaction with colleagues; of the 35 surveyed respondents, 16 preferred the pilot space, 8 preferred arrangements prior to the pilot and 11 had no preference (see A/69/749, para. 34). In terms of space utilization, the flexible working pilot was able to:

- Reconfigure workspace for 105 seats where previously there were 84, resulting in an increase of 25 per cent;
- Demonstrate that 128 staff members could operate comfortably in a workspace originally configured for 84 staff members, resulting in an increase of 52 per cent.

57. The Board considers that the Administration should set more ambitious expectations of space utilization resulting from flexible working. The Administration's business case expects a reduction of 18 per cent in the overall space portfolio in New York from a seat-to-person ratio of 0.81 to 1.00. The Administration undertook a comprehensive workspace utilization study in 2014 observing 1,160 spaces on 15 floors across five buildings, including the Secretariat, DC-1, DC-2, Innovation Luggage and UNITAR Buildings. The study found that an average of between 38 and 48 per cent of the spaces were utilized at any one time during the day. The findings indicate that space could be used significantly more efficiently through the introduction of flexible working and could accommodate more staff members than proposed in the business case.

58. Implementing flexible working is a challenging change management activity. The business case recognizes the need for communicating effectively with United Nations staff, supporting cultural change and having clear and visible senior management sponsorship and leadership. Flexible working aligns with other change programmes that the Administration is undertaking, which need to be understood holistically to accurately inform operational needs. For example, the deployment of the new enterprise resource planning system, Umoja, and the new global service delivery model should affect staffing and office space requirements, which, along with flexible working, will inform the need and scale of the long-term accommodation project.

F. Acknowledgement

59. The Board wishes to express its appreciation for the cooperation and assistance extended to its staff by the Under-Secretary-General for Management and members of his staff.

(*Signed*) Mussa Juma **Assad**
Controller and Auditor General of the United Republic of Tanzania
Chair of the Board of Auditors

(*Signed*) Amyas C. E. **Morse**
Comptroller and Auditor General of the United Kingdom
of Great Britain and Northern Ireland
(Lead Auditor)

(*Signed*) Shashi Kant **Sharma**
Comptroller and Auditor General of India

30 June 2015

Annex I

Budget and anticipated final cost estimates from the progress reports of the Secretary-General

(Thousands of United States dollars)

	Strategy IV	*Accelerated strategy IV*				
	Approved as at 2006	*Status as at August 2007*	*Status as at September 2008*	*Status as at September 2009*	*Status as at September 2010*	*Status as at May 2011*
Construction	935 300	964 625	1 032 900	1 057 402	1 016 920	1 058 714
Enhanced security upgrade construction	–	–	–	–	–	82 185
Professional fees, management costs	231 000	234 508	280 340	302 365	316 549	326 994
Enhanced security upgrade fees	–	–	–	–	–	10 713
Swing space fit-out and rental	214 500	389 858	425 695	426 881	421 113	529 679
Contingency	199 900	199 859	235 236	181 423	202 209	89 084
Forward price escalation	296 000	277 960	–	–	–	–
Enhanced security upgrade contingency	–	–	–	–	–	6 659
Anticipated cost of capital master plan	**1 876 700**	**2 066 810**	**1 974 171**	**1 968 071**	**1 956 791**	**2 104 028**
Approved budget	(1 876 700)	(1 876 700)	(1 876 700)	(1 876 700)	(1 876 700)	(1 876 700)
Contributions from Member States	–	–	–	–	–	(110 500)
Project (construction) cost overrun	**0**	**190 110**	**97 471**	**91 371**	**80 091**	**116 828**
Working capital reserve fund						
Funding (construction) shortfall	**0**	**190 110**	**97 471**	**91 371**	**80 091**	**116 828**
Associated costs					162 485	146 806
Secondary data centre					19 770	20 700
Contribution for secondary data centre					(4 228)	(4 228)
Total cost overrun to United Nations					**258 118**	**281 034**

	Strategy IV	*Accelerated strategy IV*				
	Approved as at 2006	*Status as at July 2012*	*Status as at June 2013*	*Status as at December 2013*	*Status as at June 2014*	*Status as at March 2015*
Construction	935 300	1 206 003	1 219 950	1 226 559	1 236 119	1 171 119
Enhanced security upgrade construction	–	82 628	82 628	82 628	89 287	89 287
Professional fees, management costs	231 000	368 290	368 831	368 874	368 874	368 874
Enhanced security upgrade fees	–	10 713	10 713	10 713	10 713	10 713
Swing space fit-out and rental	214 500	511 819	511 819	511 819	509 980	509 980
Contingency	199 900	41 638	14 150	7 721	0	0
Forward price escalation	296 000	–	–	–	–	–
Enhanced security upgrade contingency	–	6 659	6 659	6 659	0	0
Anticipated cost of capital master plan	**1 876 700**	**2 227 750**	**2 214 750**	**2 214 973**	**2 214 973**	**2 149 973**
Approved budget	(1 876 700)	(1 876 700)	(1 876 700)	(1 876 700)	(1 876 700)	(1 876 700)
Contributions from Member States	–	(110 689)	(113 689)	(113 912)	(113 912)	(113 912)
Project (construction) cost overrun	**0**	**240 361**	**224 361**	**224 361**	**224 361**	**159 361**
Working capital reserve fund			(71 000)	(159 400)	(159 400)	(159 400)
Funding (construction) shortfall	**0**	**240 361**	**153 361**	**64 961**	**64 961**	**(39)**
Associated costs		143 139	141 409	140 253	139 812	139 812
Secondary data centre		19 488	19 268	19 268	19 268	19 268
Contribution for secondary data centre		(4 228)	(4 228)	(4 228)	(4 228)	(4 228)
Total cost overrun to United Nations		**398 760**	**309 810**	**220 254**	**219 813**	**154 813**

Source: Board analysis of progress reports of the Secretary-General on the implementation of the capital master plan.

Notes:

From the sixth progress report (A/63/477) onward, the Administration stopped reporting contingency and forward price escalation separately.

Estimates of total expenditure for associated costs and secondary data centre were reported routinely from the eighth annual progress report (A/65/511) onward.

March 2015 figures provided for audit by the Administration.

Annex II

Status of implementation of recommendations

General Assembly session paragraph	*Summary of recommendation*	*Administration's comments on status, April 2015*	*Board's comments on status, April 2015*	*Fully implemented*	*Under implementation*	*Not implemented*	*Closed by the Board*
Sixty-seventh session/ paragraph 83	The Administration agreed with the Board's recommendation that the Department of Management (a) pilot the implementation of flexible working strategies that move away from a one-person-to-one-desk ratio and (b) assess the potential operational and financial impact of adopting flexible workplace strategies to reduce the future space needs of the United Nations in the context of any proposals for renovating existing or acquiring new office space.	A pilot environment on parts of the 18th and 19th floors of the Secretariat Building was started in October 2014. Details on the pilot were reported in the report of the Secretary-General on a comprehensive business case for the application of flexible workplace strategies at the United Nations (see A/69/749, paras. 26-42). The pilot included implementation of less than one desk/workspace per person. The General Assembly has approved implementation of flexible workplace strategies on 26 floors of the Secretariat Building and 8 floors of the FF Building. The Secretariat has also incorporated the flexible workplace approach described in the report of the Secretary-General into the long-term accommodation study of options for Headquarters.	The Administration's pilot of flexible workspace resulted in an evaluation of the expected costs and benefits of wider roll-out. Strong progress has been made, but in the Board's view, the Administration should continue to pursue a more ambitious target of space utilization resulting from flexible working.	X			

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Sixty-eighth session/ paragraph 39	The Board recommends that for future projects of this nature the Administration develop a risk-based approach to determining, allocating and reporting contingency funds on best practice in modern project management.	Refer to the report of the Secretary-General on the strategic heritage plan of the United Nations Office at Geneva (see A/69/417, paras. 118 and 119). A risk-based approach to determining, allocating and reporting contingency funds is being used for the strategic heritage plan. That has been actioned. It was explicitly reflected in the most recent report on the strategic heritage plan, as part of the internal control framework and governance structure. The principles will likewise apply to other ongoing capital projects.	The Board welcomes the intent in the project highlighted but notes there is still no standard approach to contingency management and reporting that must be followed by any capital project of the United Nations.		X		
Sixty-eighth session/ paragraph 69	The Board recommends that the working group on flexible workspace strategies (a) gather robust data on building occupancy utilization and occupancy costs per desk in each building, across the entire portfolio of New York permanent and rented space, and (b) use the analysis to better understand its future estate requirements both in New York and across the wider global estate.	The report of the Secretary-General on a comprehensive business case for the application of flexible workplace strategies at the United Nations (see A/69/749, paras. 8-10) provides details of the space utilization study conducted in September 2014. Following the report, the General Assembly has approved a broader flexible workplace project at Headquarters to be completed in early 2018. Standard costing for office and other workspace will need to be adjusted with the implementation of the flexible workplace project.	The Administration hired a consultancy firm to perform the analysis of the New York estate. We have seen no evidence that that has been done across the wider global estate, but consider the recommendation implemented in substance.	X			

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Sixty-eighth session/ paragraph 77	The Board recommends that the Administration adopt a whole life-cycle asset investment strategy and assess costed options for through-life maintenance of the Headquarters buildings.	The report of the Secretary-General on the strategic capital review (A/69/760) provides a projection of global capital requirements from 2018 to 2037. An updated report will be submitted to the first resumed part of the seventieth session of the General Assembly, which will include an analysis of cost options.	The strategic capital review has improved the information available to better understand the maintenance requirements of the Headquarters buildings. The Administration needs to assess costed options for proactive versus reactive maintenance arrangements to find the best solution for the campus.		X		
Sixty-eighth session/ paragraph 82	The Board recommends that the Office of Central Support Services review its ongoing maintenance contracts, based on an assessment of the total scope of facilities management requirements after completion of the capital master plan, and assess the possibilities for obtaining better value from any future strategic commercial relationship.	As at April 2015, the Office of Central Support Services has service contracts and in-house servicing arrangements in place for all building systems to be handed over by the capital master plan. The Office will monitor the experience of running the service contracts for a period of approximately one year to determine whether the approach needs to be refined or adjusted to ensure the required level of service and efficiency.	In the light of the plans of the Office of Central Support Services, the Board considers the recommendation to be under implementation.		X		
Sixty-ninth session/ paragraph 25 (a)	Clarify to the General Assembly during the main part of its sixty-ninth session which elements of the scope of the project will not be delivered as part of the capital master plan and define plans for delivery and any budgetary implications. Elements of the capital master plan are currently scheduled for	All the elements of the scope of the project will be delivered as part of the capital master plan. As indicated in the twelfth annual progress report, presented during the main part of the sixty-ninth session of the General Assembly, some of the elements will be completed after the closure of the	The Administration considered the recommendation implemented in August 2014. The Advisory Committee on Administrative and Budgetary Questions stated in October 2014 that the timeline for completion and the elements to be delivered after the closure of the				X

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	delivery after the Office of the Capital Master Plan closes.	Office of the Capital Master Plan in accordance with the design and planning by the Office and within the approved budget of the capital master plan. In addition, during the first part of its resumed sixty-ninth session, the Assembly was informed that, in view of the "limited occupancy" concept recommended by the Department of Safety and Security for the Library Building and the South Annex Building, some of the functions currently housed in the Library and South Annex Buildings will be relocated. The related activities, namely modifications to the Library Building, fit-out of the original North Lawn Extension Building third basement area and the establishment of alternative food services, will be handed over with associated approved capital master plan resources to the Office of Central Support Services to be completed in accordance with the planning and design of the Office of the Capital Master Plan. The Secretariat will report fully in that regard in the next annual progress report on the implementation of the capital master plan.	Office of the Capital Master Plan remained unclear. The Board considers that the recommendation was not implemented effectively during the sixty-ninth session, but is now closed, noting the findings in section C of the present report.				

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Sixty-ninth session/ paragraph 25 (b)	Apply independent project assurance to all major projects. There is currently no established approach to providing independent project assurance in the United Nations.	We reiterate our previous comments and consider the recommendation implemented. Section IV of the report of the strategic heritage plan of the United Nations Office at Geneva (A/69/417), regarding project governance and oversight, includes the establishment of an independent advisory board.	The recommendation is wider than the capital master plan. The Administration does not have an established approach to independently assure major projects and has no plans to establish one. Given the high-risk nature of major projects in the United Nations, the Board reiterates the value of a system of independent assurance to help highlight and manage risk and maximize the return on investment made by Member States in major programmes and projects. Such an approach is standard in many large organizations.			X	
Sixty-ninth session/ paragraph 25 (c)	Review maintenance arrangements on the basis of the operating data with respect to new assets currently being collected and assess possibilities for obtaining better value for money for the Administration's requirements. As previously recommended, it is important to gather operating data about new assets, such as energy consumption, maintenance patterns and the skills required for the servicing of plant and equipment, so that contractors can bid on an informed basis. That should provide the Administration with a clearer view of its overall maintenance requirements.	All service contracts are procured on a best value for money basis. Operating data required for bid purposes on new systems was obtained by the review of equipment operation and maintenance manuals, construction drawings, manufacturer websites, discussions with the key capital master plan personnel and an independent study of recommended preventative maintenance procedures for capital master plan-installed equipment (which was performed for the Facilities Management Service by a contractor). For most systems, the information was sufficient to provide a detailed scope of work for new equipment as well as	As the Facilities Management Service becomes more familiar and experienced with running the handed over systems and buildings it has developed more insight and operating data. The Administration should use the data to ascertain appropriate maintenance approaches and/or identify required training for in-house staff to maintain the campus effectively. The Board considers the recommendation to be under implementation.		X		

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		determine whether maintenance could be more economically performed through outsourcing or through in-house maintenance. In limited cases (BMS Systems, York Chillers), the Facilities Management Service opted to pursue short-term sole-source maintenance contracts with the equipment manufacturer until more system information becomes available from the capital master plan turnover and internal staff have had more experience operating the new systems.					
		Detailed equipment history and maintenance records will be recorded in the Umoja Plant Maintenance module, which is expected to be launched in November 2015. The Energy Dashboard and Reporting Tool will come online in June 2015 and will provide detailed reporting capability for energy usage by equipment. It is the intention of the Plant Engineering Section to effectively use the new data to ensure that maintenance is being performed to ensure maximum service life of the equipment and to ensure that the energy utilization of the new equipment is optimal.					

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Sixty-ninth session/ paragraph 25 (d)	Commit to visible senior leadership on the flexible workspace project. Experience suggests that, like all change initiatives that have an impact on the day-to-day working environment, senior management leading by example will be vital in gaining staff buy-in and securing the intended benefits.	Senior leadership will be involved in the implementation of the flexible workplace project in the Secretariat Building, which will be executed between September 2015 and early 2018.	There has been significant progress made during the pilot phase. Following General Assembly approval of the business case, it remains important that senior management "lead by example" and adopt the new ways of working in the proposed floorplate.		X		
	Total			**2**	**5**	**1**	**1**
	Percentage			**22**	**56**	**11**	**11**

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